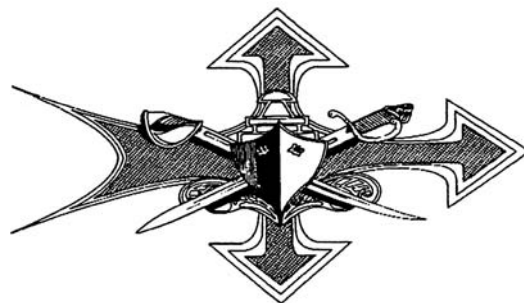


# SHIPS' SAFETY BULLETIN

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**JANUARY - MARCH 2005**

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Suggested routing should include CO, XO, department heads, division officers,  
CMC, CPO mess, petty officers' lounge, work-center supervisors, and crew's mess.  
Blanks provided for initials following review:

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## ORM Instruction Update

By ETC (SW) Leon DuPlantier  
Naval Safety Center

As of 30 July 2004, OPNAVINST. 3500.39B superceded 3500.39A. This instruction provides guidance for operational risk management (ORM) training and requirements. It also outlines policy that requires all naval activities to apply ORM to optimize operational capabilities and readiness. The release of this new instruction has added a few requirements that may effect existing command safety publications, instructions, or standard operating procedures.

Lessons learned from any process are valuable tools for improving the process in the future. The Total Risk Assessment and Control System (TRACS) is a database of ORM lessons learned from previous ORM risk assessment studies. Understanding that every evolution is different; TRACS may consider ORM hazards for your evolution that you may have overlooked. You can find the TRACS link at the Navy Safety Center Web Site:

<http://www.safetycenter.navy.mil/>

Since the release of the first ORM instruction on 26 September 2000, the Naval Safety Center

has been hard at work in cooperation with fleet commanders, type commanders, commanding officers, and the Naval Education and Training commands to integrate ORM into Navy Occupational Standards. Under the new instruction, the discussion of ORM is required during command indoctrination and all training evolutions. Furthermore, it is required during the inter-deployment training cycle (IDTC).

To maintain a healthy ORM program within your command, an officer and a senior enlisted in a significant command leadership position are required to qualify as ORM instructor. They can earn the qualification by completing the OPNAV sponsored two-day application and integration course for enlisted members and officers or through graduation from the Aviation Safety Officer or Aviation Safety Command course at Monterey for officers. After qualification, the ORM instructor will train command personnel using NAVOSHENVTRACEN training materials, NETC GMT ORM training, videos and lesson guides, and materials provided by the OPNAV Applications and Integration course or the Aviation Safety School. Venues include training

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This professional flyer is approved for official distribution to the surface force and to their appropriate staffs, schools and other organizations. The information is designed to advise Department of the Navy personnel of current and emerging safety concerns to enhance their professional development and improve operational readiness. This bulletin should not in itself be used as an authoritative document. However, it will cite the appropriate reference when available.

in the shops, at stand-downs, indoctrination classes, training syllabus events, etc...

For further information on training and the requirements for your command, contact Navy Occupational Safety and Health Environmental Training Center (NAVOSHENVTRACEN) at (757) 445-8778 ext. 300, DSN 565-8778 or visit them on the web at

<http://safetycenter.navy.mil/training/>

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## **Attention! There is a Traffic Safety Program Instruction**

By LCDR Jerry Chapmon  
Naval Safety Center

This is not the first article to appear in the SSB concerning the Traffic Safety Program or traffic safety in general. But, in light of current trends and the goal of a 50% reduction in mishaps, more focus in traffic safety and strong leadership is needed to reduce the number of traffic fatalities. At the current rates, this year's fatality numbers will equal last years with most of the same causes. Those factors continue include failure to use seat belts, drinking and driving, and reckless motorcycle operation. Recognizing this trend, Commander Naval Surface Force released a message (dtg 031606Z MAY 04) discussing motorcycle safety to reinforce OPNAVINST 5100.12G, the Navy Traffic Safety Program. There are specific points I would like to call out in addition to motorcycle safety detailed in the Navy Traffic Safety Program instruction.

First is the fact that the Navy Traffic Safety Program instruction is a lawful general order. This fact is pointed out in paragraph 5b of OPNAVINST 5100.12G which states, **"Violation of the italicized portions of this instruction subject the involved service**

**members to disciplinary action."** It goes on to say that if a service member is injured as a result of violating this instruction, **"Such violation may be considered in making line of duty/misconduct determinations for injuries received on or off a naval installation."** This is a powerful tool commanders have in enforcing this instruction but the majority of junior Sailors do not comprehend the ramifications of being found "not in the line of duty." The chain of command must educate junior Sailors on how expensive irresponsible behavior can be.

At the Naval Safety Center we are finding during safety surveys that 68.8 percent of the ships DO NOT have an effective traffic safety program. This usually means there is no knowledge of the existence of a traffic safety program instruction, no traffic safety program manager, or they are not aware of the requirements for attending the AAA Driver Improvement Course. The Navy Traffic Safety Program instruction is the backbone to establishing a traffic safety program. But, there are additional resources available to help you establish your program.

The Naval Safety Center has numerous educational resources and program suggestions to get your traffic safety program up and running. The Safety Center Ashore and/or Afloat Directorates can provide shipboard training and program information. Much of this information is available through the Safety Center web site (<http://safety.center.navy.mil>). The Afloat Directorate has a PowerPoint presentation available on how to establish a traffic safety program that also contains web resources and best practices. Point of contact for this presentation is LCDR Chapmon at [jerry.chapmon@navy.mil](mailto:jerry.chapmon@navy.mil).

The Naval Traffic Safety Program instruction is the starting point in establishing an effective traffic safety program; leadership will do the rest. Listed below are some websites to visit to help you in combating motor vehicle fatalities.

Contact us or see the following on the Net for more information.

<http://safety.army.mil/home.html>  
<http://navdweb.spawar.navy.mil/>  
<http://www.nhtsa.dot.gov/>  
<http://www.vastatepolice.com/>  
<http://www.drowsydriving.org/>  
<http://www.herocampaign.org/>  
<http://www.madd.org/>

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## Gas Free that Space!!!

By CDR Walter Banks  
Naval Safety Center

Here is the latest in a series of mishaps that should not have happened. The scenario goes something like this; it is a routine workday and you already have a million and one things to get done. You scratch your head and ask yourself, "Now how am I going to complete all of these tasks prior to liberty call?" We all know that in port, special evolutions normally shall not be conducted outside of normal working hours. The engineer officer shall personally review tag outs for any work that has to be conducted outside of the normal daily routine. The commanding officer, executive officer, engineer officer, or a qualified EOOW designated by the engineer officer, will be on board whenever any special evolutions are performed that are listed in the Engineering Department Organization and Regulation Manual.

It is 0900 and you have been directed to repair a section of piping in the forward CHT pump room. The first thing that should become evident to you is that you are now going to enter a possible IDLH (immediately dangerous to life or health) environment, which only the commanding officer can authorize. You have been told that work on the CHT system will be completed prior to granting liberty call, (sound

familiar?) The work centers received permission from the EOOW to clear tags and place the forward CHT system back into operation. The HT3 proceeded to the forward CHT pump room and commenced clearing tags and removes the blank flange. Upon loosening five bolts and removing three others from the discharge flange, Hydrogen sulfide (H<sub>2</sub>S) and sewage under static head pressure began to escape into the pump room. The HT3 tried to divert the flow of sewage by opening the forward CHT pump discharge valve and gravity drain the system into the forward CHT tank. Due to the high concentration of H<sub>2</sub>S, the HT3 decided to evacuate the pump room. Root cause of the mishap: Chain of command failed to verify system diagrams to ensure that the forward CHT system was properly isolated and tagged out and that all safety precautions were in place prior to work commencing.

Hydrogen sulfide (H<sub>2</sub>S) is a deadly toxic gas, which generates an odor comparable to that of rotten eggs. It is found in a number of systems, with the most common onboard ship being the CHT systems and the AFFF fire fighting system. You will find that the guiding documents for performing work on systems involving hydrogen sulfide can be found in NSTM 074V3, *Gas Free Engineering*. There are a number of other instructions that must be reviewed prior to commencing work in this area. Be safe and until next time stay safe and follow the instructions.

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**Q. Is it required to tag out the electrical power that supplies the halon peanut bulb?**

**A. Yes. IAW NSTM 300-2.5.2 The halon peanut bulbs are mounted inside the housing with exposed energized circuits and require the use of a tag out or request chit for working on energized gear.**

## The Importance of Valve Labels

By GSCS (SW) Joseph Petraglia  
Naval Safety Center

Engineers in main propulsion and auxiliary spaces face the daily challenge of making sure all requirements are being met to maintain ship services. From cooling systems for combat systems equipment and hotel services for galley and sanitary services to the ship's propulsion and electrical plants, each carry an enormous effort to keep them operating and maintained within operating parameters. The complexities of these systems are too much for one person to memorize; therefore it is imperative to label and color-code all valves properly.

While it makes sense to commit to memory piping system diagrams, valve labels are essential in enforcing the proper system alignments we conduct daily. Additionally, a junior maintenance person performing repairs may misalign a system because there are no valve identifiers. For example, a gas turbine generator is started and placed online; everything seems fine at first. A half hour later an alarm sounds for high lube oil temperature. After investigating, the technician discovered that an unlabeled valve in the wrong position caused the casualty condition in the seawater cooling system. This potentially catastrophic condition could have been avoided.

Here is a suggestion you can use as a training tool and ensure all valves are labeled properly. Assign inexperienced Sailors the task of tracing out valve alignments in accordance with EOSS or ship's drawings. Have them hand over hand the system and document all the discrepancies they found with the valve, labeling, EOSS, or ship's drawing. This is a perfect training tool that works to train the Sailor as well as verify equipment procedures and condition. The systems can seem complex and intimidating to the junior Sailor; so, it's a good idea to have

more experienced Sailors also verify valve labeling and procedures.

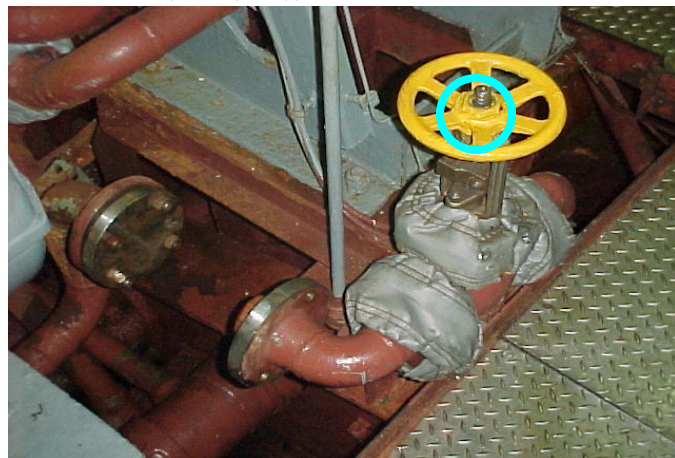
If they find valves labeled incorrectly or have no label, then put a temporary label on the valve until new labels are fabricated.

If we allow systems to be aligned without proper valve labels, then a dangerous precedence is set with junior technicians and plant reliability is compromised. Refer to sections E and F of GSO 507, *Machinery and Piping Designating and Marking* and section 7.8.3.2 of NSTM 505, *Piping Systems*.

Below are pictures of properly labeled valves and some things to think about when valves are not labeled properly.



VALVE WITH A LABEL



VALVE WITHOUT A LABEL

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## Tag It For Your Sake!

By CDR Walter Banks  
Naval Safety Center

Some of you “old salts” are probably sick and tired of reading about the tag-out issue, feeling everyone should have gotten the message by now. Well, old salts, we still have a problem with people understanding, using, and enforcing the current tag-out program.

Most of the recent discrepancies Naval Safety Center surveyors found with shipboard tag-out programs resulted from failure to follow basic procedures. Discrepancies include Sailors being unfamiliar with their systems, crew members not being qualified, senior personnel not properly QAing the program, and people unfamiliar with the audit process conducting audits--to name just a few.

Other more common discrepancies are:

- Reason for tag-out block improperly filled out
- Incorrect information in the documentation block supporting the tag-out
- Missing tag-out authorization signature
- Missing repair activity authorization
- Missing clearance authorization signature
- First and second person signatures missing
- Improper tag-out audit conducted: date of audit not annotated correctly on back of tag-out sheet
- Tags hung on incorrect piece of equipment
- Instrument log not being audited with tag-out audit
- OOC instruments not documented in instrument log
- Ship with multiple tag-out logs not conducting audits on all departmental tag-out logs
- Completed sheets not being maintained onboard for the required timeframe
- Change page not filled out

- Unclear position/condition of tag-out
- Tag-out user's manual missing from the tag-out log

Failure to follow these procedures has resulted in minor flooding, electrical shock, and equipment damage—none of which are acceptable. Repair activities like shipyards, SIMAs, AITs, and others outside your ship's lifelines and who disable a ship's system or piece of equipment must use tag-outs in accordance with the Tag-out Users Manual, (Revision 1).

During recent ship surveys we also noted the majority of ships visited had the outdated version of the TUM. Have you taken a really hard look at your tag-out program? When did you last critique a tag-out training session, and who was the target audience?

The tag-out program is the Navy's most important safety barrier against mishap risks we face daily when performing preventive and corrective maintenance. Tag-outs must therefore be administered daily at peak efficiency, because your shipmates' lives depend on it.

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## Chain Hoist Weight Testing

By LT William Thomas  
Naval Safety Center

Recently, it came to our attention there were no weight test requirements for portable hand chain hoists reflected on MIP 6645/004, which requires the cleaning, inspection and lubrication of the chain hoist. However, according to the Joint Fleet Maintenance Manual (COMFLTFORCOM INST 4790.3 Rev. A Chg 1) and various



technical manuals, all load-bearing equipment, including chain hoists, have assigned weight test periodicity. The periodicities are on the PMS MIP and the appropriate NSTM. For example, the periodicity for pneumatic chain hoists is forty-eight months (MIP 6645/007-63 and NSTM 572, *Shipboard Stores and Provisions Handling*).

Vol IV of the Joint Fleet Maintenance Manual delineates the requirements for weight testing of storage and handling devices, and references NSTM 572. Paragraph 3.1 of NSTM 572 states that portable chain hoist should be weight tested during every ship's overhaul, but not more than sixty months. However, the PMS MIP 6645/004 for portable chain hoists did not have this requirement stated on it in the recent SFR. The Naval Safety Center submitted a technical feedback report to correct this issue. In response, FTSC stated:

"In response to your feedback, pen and ink changes are authorized to revise MIP 6645/004: Add scheduled maintenance requirement without MRC; 1. Request repair activity to conduct weight test. Note: Accomplish every 60 months and after repairs or modifications to the portable chain hoist. Periodicity 60M-1R\*\*."

Also, keep in mind that MIP 6645/005 requires each ship to maintain a schedule matrix that lists the last weight test date and the next due date. To make things easier to remember here are the weight test requirements:

- |             |   |
|-------------|---|
| 48 Months – | Electric Wire Rope Hoist<br>Electric Chain Hoist<br>Pneumatic Chain Hoist<br>Hand Chain Hoist w/Monorail<br>Electric Wire Rope Water Barrier<br>Weapons Handling Manual<br>Portable Chain Hoist |
| 60 Months - | Stores Handling Manual Portable<br>Chain Hoist  |

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## Portable Powered Tool Safety

By CDR Walter L. Banks  
Naval Safety Center

**A**t home and on the job, portable powered tools make our jobs easier and produce better results. They are so common that often times we forget the hazards involved when using them. Grinding and sawing can generate chips that could cause serious eye injury. An improper ground can cause electrocution. Recognizing the hazards that are present when using portable tools can go a long way in preventing mishaps and personnel injury.

You can limit the risk of injury by becoming properly trained and qualified to operate these tools. The use of personal protective equipment (e.g., safety shoes, face shield and goggles, and hearing protection) is mandatory for all personnel operating this equipment or those expected to be in the area where this equipment is being operated. Before operating equipment, inspect your tools before use. Look for cracked or loose handles, bent shafts and spindles, frayed power cords and badly worn hoses, missing guards, and noise hazard warnings. When portable tools are no longer serviceable, remove them from service by placing an out of commission tag on the tool and turn them into the appropriate work center for repair or disposal.

Whether a tool is electric, pneumatic, or hydraulic operated you must always observe some general safety precautions: IAW paragraph C0903 of OPNAVINST 5100.19D:

- Do not use electrical tools in damp, wet, or hazardous areas unless approved for that purpose.
- Ensure power cords do not present trip hazards.
- Keep work areas well illuminated.
- Do not wear sagging or loose fitting clothes or jewelry.
- Keep all non-essential persons well clear of the work area and post signs and barriers.

- Never use compressed air at pressures greater than what the job calls for and never use compressed air at pressures greater than the manufacture specifications.
- Do not drop tools or transport them by their cords or other power sources.

This article was written to raise your level of awareness when at work and at home. If you use portable tools, know the rules of operation. We have had too many of our Sailors and Marines injured because they failed to assess their work environment and evaluate the risk of completing the task. Remember, **SAFETY FIRST!**

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## EEBD Information

By DCC James Speed  
Naval Safety Center

**N**STM 077, *Personal Protective Equipment*, requires each ship class to have specific quantities of EEBDs onboard. Total shipboard EEBD quantities were determined by type commander damage-control representatives for each ship class and are found on the below AELs:

Ship Class	AEL#
LHA-1	2-330024201
LHD-1	2-330024202
LPD-4	2-330024203
LST	2-330024204
LSD	2-330024205
MCS-12	2-330024206
MCM	2-330024207
MHC	2-330024208
AGF	2-330024221
ARS-50	2-330024222
CG-47	2-330024223
DD-963	2-330024224
DDG-51 thru 78	2-330024225

DDG-79 and later:	2-330024226
FFG-7	2-330024227
LCC-19	2-330024228
CV	2-330024230
CVN	2-330024231
AOE	2-330024241

NSTM 077 and COMNAVSURFORINST 3502.1B, *Surface Force Training Manual*, also provide the following EEBD guidance:

All personnel shall complete emergency egress training within 96 hours of reporting aboard and every six months thereafter. This training will consist of blindfolded escape from working, berthing, and watch standing spaces. Training will also include actual activation and donning of a training emergency escape breathing device (EEBD).

Provide one EEBD for each rack in each crew berthing-and-living space. This includes crew, CPO, troop, and airwing berthing, staterooms, embarked personnel and staff berthing accommodations. Attach EEBDs to, or under, individual racks or make sure they are near each rack. EEBD stowage cases are prefabricated into modular berths. EEBDs located near individual racks must be easily located for rapid retrieval from the compartment.

Place EEBDs no more than five feet from assigned berths.



All main engineering spaces shall have EEBDs equal to two times (200 percent) the general quarters manning. An EEBD shall be located at each watch station. Remaining engineering space EEBDs shall be disbursed to ensure coverage for personnel in remote areas and along normal escape routes. Additional EEBDs may be necessary to ensure adequate coverage.

Provide one EEBD for every Condition I billet or underway watch in deep spaces below the DC deck and in spaces having difficult escape routes.

Provide EEBDs in high-risk areas on, or above, the DC deck that present evacuation difficulties or hazards.

Provide one EEBD for individuals manning repair stations (locker officer, locker leader, plotters, phone-talkers, etc).



PMS requirements for EEBDs include MIP 6641/004 24M-1R, inspect belt-worn and wall-mounted EEBDs for signs of high-force impact and expiration dates. Additionally, for belt-worn EEBDs, MIP 6641/004 R-1D is required upon initial issue and daily when in use. If the Ocenco units are missing the tamper indicating ball bearing during PMS checks, then remove them from service and return them back to Ocenco, Inc. for re-certification. The technical point of contact is Ms. Cathy Carpenter at.: (850) 234-4653, DSN 436-4653

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## Using Low Pressure Air For Housekeeping Purposes

By CDR W.Banks  
Naval Safety Center

There have been several questions from the fleet concerning the use of low pressure air as a cleaning aide. While flight deck personnel use ships low-pressure air to assist them in preparing for the day's flight operation, it should not be used internally to clean the ship. Paragraph C1302a (11) of OPNAVINST 5100.19D prohibits the use of low-pressure air for blowing down overheads of interior spaces. It specifically states, "Do not use compressed air to clean personnel or clothing or to perform general space clean up in lieu of vacuuming or sweeping."

An exception to using low pressure air in interior spaces would be when cleaning machinery parts that have been properly disassembled provided the supply air pressure does not exceed 30 psig and that hearing protection and proper safety shield tip with a regulator, and some authorized form of respiratory protection is used.

There are a few reasons why low-pressure air cannot be used to conduct general housekeeping. When used on interior spaces, it causes the air inside the ship to become contaminated with whatever debris that has been disturbed during the blow down. Personnel transiting the area do not have proper respiratory protection and can become contaminated with hazardous dust particles. Furthermore, the end result of the low pressure air blow down can do more harm than good when performing a field day since the debris eventually resettles on other horizontal surfaces.

Protect yourself and your shipmates; restrict low-pressure air blow downs on ship interior spaces!

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